Re: nBLM system: use of some materials

Irena Dolenc Kittelmann [irena.dolenckittelmann@esss.se]
Sent: 16 March 2018 12:45
To: Michael Plagge [Michael.Plagge@esss.se]; SEGUI Laura

Hi Michael,

many thanks for your help! :)

Regards,
Irena

On 3/15/18 6:32 PM, Michael Plagge wrote:

> Hello Irena and Laura,
>
> My apologies for not replying earlier - a bee hive is occupying my inbox. Yes, the use of these materials is acceptable (Les matériels sont tout à fait acceptable :). Please go ahead with the procurement.
>
> Best regards,
>
> Michael

> On 15 Mar 2018, at 11:13, Irena Dolenc Kittelmann <irena.dolenckittelmann@esss.se> wrote:
>
> Dear Michael,
>
> Could you have a look at the materials that Laura is proposing to use for our nBLM system (see her email below) and confirm whether they are allowed to be used in the tunnel?
> However, please let us know in case we should be addressing someone else on this matter.
>
> Regards,
> Irena
>
> On 3/1/18 8:33 PM, Lali Tchelidze wrote:
>
> > Dear Laura,
> >
> > I have no comments from radiation damage point of view.
> >
> > Michael Plagge is an interim replacement for Duy and he should be able to help you with consideration for other safety aspects.
> >
> > Thanks,
> > Lali.

From: SEGUI Laura <laura.segui@cea.fr>
Date: Wednesday 28 February 2018 at 10:39
To: Lali Tchelidze <lali.tchelidze@esss.se>, Dennis de Wit <Dennis.deWit@esss.se>, Michael Plagge <Michael.Plagge@esss.se>

Cc: Irena Dolenc Kittelmann <irena.dolenckittelmann@esss.se>, Thomas Papaevangelou <thomas.papaevangelou@cea.fr>
Subject: RE: nBLM system: use of some materials

Dear all,

Forwarding this email to may be more adequate persons following Duy advice. Sorry for the spam if you are not the correct person...Could you please let me know to whom address the questions instead in that case?

Best regards,
Laura

From: SEGUI Laura
Sent: 28 February 2018 10:35
To: Duy Phan; Lali Tchelidze
Cc: Irena Dolenc Kittelmann [irena.dolenckittelmann@esss.se]; PAPAEVANGELOU Thomas
Subject: nBLM system: use of some materials

Dear Duy and Lali,

We are considering the use of two materials in the nBLM system and we would like to be sure of their suitability to be placed in the ESS tunnel. Please forward this email to the appropriate person if needed.

I have tried to quantify also the amount of material.

The materials are:

1.- Polyurethane gas tubes

- There will be used to bring the gas from the gas pipes in stainless steel arriving to the tunnel to each detector placed close to the accelerator. We have chosen this flexible material instead of stainless steel because we need to be flexible in the positioning of the detectors during commissioning of the system.
- Diameter of the tubes is 4/6 mm (inner/outer)
- Length (approx.):
- 8 meters close to each DTL (at a distance of ~0.5-1m)
- 60 meters all along the spokes (at a distance of ~0.5-1m)
- Few meters between MB4 and MB5
- Few meters between HB10 and HB115
- Few meters close to first bend magnet
- Few meters close to the raster magnets and PBW

Here is the link, in French but you can find the documentation in English (doc name:
Festo Plastic tubing, standard O.D.)
https://fr.rs-online.com/web/p/tuyaux-dair/1216292/
We were considering to use PUN-H that is halogen free and have almost the same characteristics as PUN-VO (flame retardant).

We know this material is ok at CERN, and I see that in terms of radiation is "nearly always usable in terms of radiation" ref. ESS-0007659. But let us know if it is ok regarding all other features.

2.- Silicone VMQ40 joints

- To close the 84 detectors (i.e. one per detector). Therefore they are enclosed in aluminium chambers of ~3cm thickness.
- They have a diameter 162mm, thickness 3.5mm
- We have seen that as the other material in terms of radiation is "nearly always usable in terms of radiation" ref. ESS-0007659.

Please let us know if we can proceed with the procurement of these materials for the use in the system and let me know if you need more information.

Thank you in advance.

Cheers,
Laura

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